



## The Relationship Between Pre-Clinical Summative Assessment Scores and Student Performance in Clinical Practice

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# Title: THE RELATIONSHIP BETWEEN PRE-CLINICAL SUMMATIVE ASSESSMENT SCORES AND STUDENT PERFORMANCE IN CLINICAL PRACTICE

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**Aim:** To determine the relationship between students' summative assessment scores in pre-clinical coursework and their performance in clinical practice.

**Design:** A retrospective cohort study of students from four consecutive intakes of a post-graduate entry-level physiotherapy program.

**Method:** Assessment data for pre-clinical and clinical practice subjects in four core clinical areas of physiotherapy were retrieved. Summative assessments investigated were Objective Structured Clinical Examinations, written examinations and oral presentations. Performance in clinical practice was measured using the Assessment of Physiotherapy Practice instrument. Mean scores for each assessment type were calculated and entered into SPSS v23 for analysis.. Linear and multiple regression were undertaken between mean pre-clinical summative assessment scores and clinical performance scores. Ethical approval was received from Bond University Human Research Ethics Committee.

**Results:** Assessment data from 121 students were included. Pre-clinical assessment scores were significantly related with clinical performance: Objective Structured Clinical Examination  $r^2 = 0.30$ ,  $p < 0.001$ ; written examination  $r^2 = 0.11$ ,  $p < 0.001$ ; oral presentation  $r^2 = 0.07$ ,  $p = 0.003$ . A multiple regression model containing the three pre-clinical assessments (adjusted  $R^2 = 0.321$ ) demonstrated significant independent contributors to clinical performance: Objective Structured Clinical Examinations ( $\beta = 0.511$ ,  $p < 0.005$ ) and oral presentations ( $\beta = 0.201$ ,  $p = 0.010$ ).

**Conclusion:** Objective Structured Clinical Examination scores had a moderate predictive relationship with clinical performance, explaining 30% of the variance in student clinical performance. Objective Structured Clinical Examination scores could be used to identify students at a greater risk of poor performance in clinical practice, thereby providing an opportunity for intervention and remediation before students commence placement.

**Biography:** Rebecca Terry is an Assistant Professor in the Bond University Doctor of Physiotherapy Program. Before joining Bond University, Rebecca practiced in acute hospital environments and had a special interest in neurological rehabilitation. As a Senior Physiotherapist she was a clinical educator for students in neurological rehabilitation placements in spinal cord injury, neurosciences and general rehabilitation settings. One of her current roles at Bond as the First Year Clinical Support Liaison sees her closely monitoring students as they complete clinical placements in core areas of physiotherapy. Her interest and involvement in student education as both a clinical and university educator has led her to pursue PhD studies exploring the relationship between student performance on university-based assessments and their performance in clinical practice settings.